

# State of Utah

## DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION OF AIR QUALITY

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DAQE-216-02

March 22, 2002

Russell Leslie  
SUNROC Corporation  
180 North 300 East  
St. George, Utah 84770

Dear Mr. Leslie:

Re: Approval Order: Aggregate Processing and Truck Mix Concrete Plant  
Washington County, CDS-B, NSPS, HAPs, Title V  
Project Code: N2516-001

The attached document is the Approval Order (AO) for the above-referenced project.

Future correspondence on this Approval Order should include the engineer's name as well as the DAQE number as shown on the upper right-hand corner of this letter. Please direct any technical questions you may have on this project to Mr. Tim M. De Julis. He may be reached at (801)536-4012.

Sincerely,

Richard W. Sprott, Executive Secretary  
Utah Air Quality Board

RWS:TMD:jc

cc: Southwest Utah Public Health Department

# **STATE OF UTAH**

## **Department of Environmental Quality**

### **Division of Air Quality**

#### **APPROVAL ORDER: AGGREGATE PROCESSING AND TRUCK MIX CONCRETE PLANT**

**Prepared By: Tim M. De Julis, Engineer**

**Phone: (801) 536-4012**

**Email: tdejulis@deq.state.ut.us**

#### **APPROVAL ORDER NUMBER**

**DAQE-216-02**

**Date: March 22, 2002**

#### **Sunroc Corporation**

**Source Contact**

**Russell Leslie**

**(435) 634-2200**

**Richard W. Sprott**

**Executive Secretary**

**Utah Air Quality Board**

## *Abstract*

*SUNROC Corporation requests permission to operate aggregate mining operations and a truck mix concrete plant located at 1825 East 3850 South, St. George. Sources of pollution present at the Ft. Pearce pit include, two (2) - crushers, three (3) - screens, associated conveyors, one (1) - concrete batch plant (including two (2) - material feed hoppers with associated conveyor, two (2) - material storage silos with one (1) - fabric filter baghouse each, and one (1) - batch weigh hopper), disturbed ground on-site, aggregate storage piles, in-plant haul roads (paved with a six inch layer of cobble material, one inch in diameter or larger), off-highway, diesel fueled, mobile equipment items (bulldozers, front-end loaders, and water truck), and one (1) - diesel fueled, power generator (224 kW). Washington County is an attainment area of the National Ambient Air Quality Standards (NAAQS) for all pollutants. New Source Performance Standards (NSPS) apply to this source (40 CFR 60 Subpart OOO). National Emission Standards for Hazardous Air Pollutants (NESHAP) and Maximum Available Control Technology (MACT) regulations do not apply to this source. Title V of the 1990 Clean Air Act applies to this source. The emissions, in tons per year, will be as follows:  $PM_{10}$  (6.59),  $NO_x$  (30.30),  $SO_2$  (2.96), CO (10.60), VOC (2.30), HAPs (0.01).*

The project has been evaluated and found to be consistent with the requirements of the Utah Administrative Code Rule 307 (UAC R307). A public comment period was held in accordance with UAC R307-401-4 and no comments were received. This air quality Approval Order (AO) authorizes the project with the following conditions, and failure to comply with any of the conditions may constitute a violation of this order.

### **General Conditions:**

1. This AO applies to the following company:

#### Site Office

SUNROC Corporation  
1825 East 3850 South  
St. George, UT 84770

#### Corporate Office Location

SUNROC Corporation  
180 North 300 East  
St. George, UT 84770  
Phone Number (435) 634-2200  
Fax Number (435) 673-7828

The equipment listed in this AO shall be operated at the following location:

#### PLANT LOCATION:

1825 East 3850 South, St. George, Washington County

Universal Transverse Mercator (UTM) Coordinate System: UTM Datum NAD27  
4,102.38 kilometers Northing, 273.64 kilometers Easting, Zone 12

2. All definitions, terms, abbreviations, and references used in this AO conform to those used in the Utah Administrative Code (UAC) Rule 307 (R307), and Title 40 of the Code of Federal Regulations (40 CFR). Unless noted otherwise, references cited in these AO conditions refer to those rules.
3. The limits set forth in this AO shall not be exceeded without prior approval in accordance with R307-401.

4. Modifications to the equipment or processes approved by this AO that could affect the emissions covered by this AO must be approved in accordance with R307-401-1.
5. All records referenced in this AO or in applicable NSPS, which are required to be kept by the owner/operator, shall be made available to the Executive Secretary or Executive Secretary's representative upon request, and the records shall include the two-year period prior to the date of the request. Records shall be kept for the following minimum periods:
  - A. Emission inventories Five years from the due date of each emission statement or until the next inventory is due, whichever is longer.
  - B. All other records Two years
6. SUNROC Corp. shall operate the aggregate processing equipment and truck mix concrete plant and shall conduct its operations of the Ft. Pearce pit in accordance with the terms and conditions of this AO, which was written pursuant to SUNROC Corp.'s NOI submitted to the Division of Air Quality (DAQ) on March 21, 2001, and additional information which was submitted to the DAQ on August 27, 2001, September 24, 2001, October 30, 2001, and January 7, 2002.
7. The approved installations shall consist of the following equipment:

Aggregate Harvesting and Processing Plant

- A. One (1) - Jaw Crusher (40 CFR 60 Subpart OOO)

Rated Capacity:	450 tons per hour	
Manufacturer:	Armadillo	*
Attached Equipment:	Grizzly Feeder	
- B. Two (2) - Triple Deck Horizontal Screen

Rated Capacity:	450 tons per hour each	
Manufacturer:	JCI	*
- C. One (1) - Cone Crusher (40 CFR 60 Subpart OOO)

Rated Capacity:	450 tons per hour	
Manufacturer:	El Jay	*
Attached Equipment:	Double Deck Horizontal Screen	
Rated Capacity:	450 tons per hour	

Aggregate Wash Plant

- D. One (1) - Triple Deck Horizontal Screen

Rated Capacity:	450 tons per hour	
Manufacturer:	SECO	*

Truck Mix Concrete Plant

E. One (1) - Cement Silo

Attached Equipment:	One (1) - Baghouse	
Bag Material:	Cotton	*
Cleaning Mechanism:	Shaking	*

F. One (1) - Flyash Silo

Attached Equipment:	One (1) - Baghouse	
Bag Material:	Cotton	*
Cleaning Mechanism:	Shaking	*

G. One (1) - Truck Mix Concrete Loading Drum

Attached Equipment:	One (1) - Baghouse	
Bag Material:	Cotton	*
Cleaning Mechanism:	Shaking	*

Equipment in Use Throughout Entire Plant

H. Various Conveyors

I. Various Off-Highway Mobile Equipment Items \*

Front End Loaders  
Bull Dozers  
Haul Trucks  
Water Truck

J. One (1) - Generator

Fuel Type	Diesel
Electrical Output:	224 kW (based on a power rating of 300 hp)

\* Listed for informational purposes only.

8. A manometer or magnehelic pressure gauge shall be installed to measure the differential pressure across the fabric filters in each of the baghouses listed in condition #7. Static pressure differential across the fabric filter shall be between 1.1 to 6.0 inches of water column in each case. The pressure gauge shall be located such that an inspector /operator can safely read the indicator at any time. The reading shall be accurate to within plus or minus 1.0 inches water column. Intermittent recording of the reading is required on a once per operational day basis.

**Limitations and Tests Procedures**

9. Visible emissions from the following emission points shall not exceed the following values:
- A. All crushers - 15% opacity
  - B. All screens - 10% opacity
  - C. All conveyor transfer points - 10% opacity
  - D. All baghouse exhaust stacks - 10% opacity
  - E. All diesel engines - 20% opacity
  - F. Conveyor drop points - 20% opacity
  - G. All paved, in-plant haul roads or operational areas - minimize emissions as per conditions #12 and #13 below
  - H. All other points - 20% opacity

Opacity observations of emissions from stationary sources shall be conducted according to 40 CFR 60, Appendix A, Method 9.

For sources that are subject to NSPS, opacity shall be determined by conducting observations in accordance with 40 CFR 60.11(b) and 40 CFR 60, Appendix A, Method 9.

10. The following limits shall not be exceeded:
- A. 600,000 tons of aggregate produced per rolling 12-month period
  - B. 225,000 cubic yards of concrete produced per rolling 12-month period
  - C. 3,000 hours of bulldozer operation per rolling 12-month period
  - D. 2,431 hours of power generator operation per rolling 12-month period

To determine compliance with a rolling 12-month total the owner/operator shall calculate a new 12-month total by the twentieth day of each month using data from the previous 12 months. Records of production shall be kept for all periods when the plant is in operation. Production shall be determined by weighing haul trucks when empty and full. The records of production shall be kept on a daily basis. Hours of operation shall be determined by supervisor monitoring and maintaining of an operations log.

### **Roads and Fugitive Dust**

- 11. SUNROC Corp. shall abide by a fugitive dust control plan acceptable to the Executive Secretary for control of all dust sources associated with the Ft. Pearce pit. SUNROC Corp. shall submit a fugitive dust control plan to the Executive Secretary, attention: Compliance Section, for approval within 30 days of the date of this AO. This plan shall contain sufficient controls to prevent an increase in PM<sub>10</sub> emissions above those estimated and modeled for this AO. The haul road speed shall be posted.
- 12. Use of paved, in-plant haul roads or operational areas shall generate no visible emissions.
- 13. All paved, in-plant haul roads or operational areas shall be swept or sprayed clean, as

conditions warrant, such that fugitive dust emissions are eliminated.

14. Records of the dates and times of paved, in-plant haul road or operational area cleaning shall be maintained.
15. The facility shall abide by all applicable requirements of R307-205 for Fugitive Emission and Fugitive Dust sources.

### **Fuels**

16. The owner/operator shall use only #2 fuel oil as fuel in the off-highway mobile equipment and 224 kW power generator.
17. The sulfur content of any fuel oil or diesel burned shall not exceed:

0.5 percent by weight for diesel fuels consumed in all equipment.

The sulfur content shall be determined by ASTM Method D-4294-89 or approved equivalent. Certification of all fuels shall be either by SUNROC Corp.'s own testing or test reports from the fuel marketer.

### **Federal Limitations and Requirements**

18. In addition to the requirements of this AO, all applicable provisions of 40 CFR 60, New Source Performance Standards (NSPS) Subpart A, 40 CFR 60.1 to 60.18 and Subpart OOO, 40 CFR 60.670 to 60.676 (Standards of Performance for Non-metallic Mineral Processing Plants) apply to this installation.

### **Records & Miscellaneous**

19. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any equipment approved under this AO including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Executive Secretary which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. All maintenance performed on equipment authorized by this AO shall be recorded.
20. The owner/operator shall comply with R307-150 Series. Inventories, Testing and Monitoring.
21. The owner/operator shall comply with R307-107. General Requirements: Unavoidable Breakdowns.

The Executive Secretary shall be notified in writing if the company is sold or changes its name.

This AO in no way releases the owner or operator from any liability for compliance with all other applicable federal, state, and local regulations including R307.

A copy of the rules, regulations and/or attachments addressed in this AO may be obtained by contacting the DAQ. The Utah Administrative Code R307 rules used by DAQ, the NOI guide, and other air quality documents and forms may also be obtained on the Internet at the following web site:

[http://www.deq.state.ut.us/eqair/aq\\_home.htm](http://www.deq.state.ut.us/eqair/aq_home.htm)

The annual emission estimations below include point source, fugitive dust, road dust, tail pipe emissions, grandfathered emissions, etc. and do not include fugitive emissions, etc. These emissions are for the purpose of determining the applicability of Prevention of Significant Deterioration, non-attainment area, maintenance area, and Title V source requirements of the R307. They are not to be used for determining compliance.

The Potential To Emit (PTE) emissions for this source SUNROC Corp. - Ft. Pearce pit are currently calculated at the following values:

	<u>Pollutant</u>	<u>Tons/yr</u>
A.	PM <sub>10</sub> .....	6.59
B.	SO <sub>2</sub> .....	2.96
C.	NO <sub>x</sub> .....	30.30
D.	CO .....	10.60
E.	VOC .....	2.30
F.	HAPs	
	Benzene .....	0.0014
	Propylene .....	0.0040
	Formaldehyde .....	0.0018
	Acetaldehyde .....	0.0012
	Total HAPs .....	0.01

Approved By:

Richard W. Sprott, Executive Secretary  
Utah Air Quality Board